AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the Application:

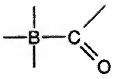
Listing of Claims

1. (Currently Amended) A pharmaceutical composition comprising a boranocarbonate compound or ion, and a pharmaceutically acceptable carrier, for the stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or for the treatment of any of acute or chronic systematic hypertension, radiation damage, endotoxic shock, hyperoxia-induced injury, apoptosis, cancer, transplant rejection, post-operative ileus, arteriosclerosis, post-ischemic organ damage, angina, haemorrhagic shock, sepsis, penile erectile dysfunction, vascular restenosis, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis or for treatment in balloon angioplasty, aortic transplantation or survival of a transplanted organ.

2. (Previously presented) A pharmaceutical composition according to claim 1 for the stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or for the treatment of any of acute or chronic systematic hypertension, hyperoxia-induced injury, cancer by the pro-apoptotic effect of CO, transplant rejection, post-operative ileus, post-ischemic organ damage, angina, haemorrhagic shock, penile erectile dysfunction, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis or for treatment in balloon angioplasty or aortic transplantation.

3. (Previously presented) A pharmaceutical composition according to claim 1 suitable for administration by an oral, intravenous, subcutaneous, nasal, inhalatory, intramuscular, intraperitoneal, transdermal, transmucosal or suppository route.

4. (Previously presented) A pharmaceutical composition according to claim 1 wherein the molecular structure of the boranocarbonate compound or ion includes the moiety



5. (Previously presented) A pharmaceutical composition according to claim 4 wherein the boranocarbonate compound or ion includes the moiety BH_3-CO-.

6. (Currently Amended) A pharmaceutical composition according to claim 4 wherein the boranocarbonate is a compound or anion of the formula:

$BH_x(COQ)_yZ_z$

wherein:[[-]]

x is 1, 2 or 3

y is 1, 2 or 3

z is 0, 1 or 2

$x + y + z = 4$,

each Q is O^-, representing a carboxylate anionic form, or is OH, OR, NH_2, NHR, NR_2, SR or halogen, where the or each R is alkyl ~~(preferably of 1 to 4 carbon atoms)~~,

each Z is halogen, NH_2, NHR', NR'_2, SR' or OR' where the or each R' is alkyl ~~(preferably of 1 to 4 carbon atoms)~~.

7. (Previously presented) A pharmaceutical composition according to claim 6 wherein z is 0.

8. (Previously presented) A pharmaceutical composition according to claim 6 or 7 where y is 1.

9. (Previously presented) A pharmaceutical composition according to claim 6 where x is 3.

10. (Previously presented) A pharmaceutical composition according to claim 6 where the boranocarbonate is an anion, with at least one Q in the form of O^- or OR, and the composition includes at least one metal cation.

11. (Previously presented) A pharmaceutical composition according to claim 10 wherein the or each metal cation is an alkali metal cation or an alkaline earth metal cation.

12. (Previously presented) A pharmaceutical composition according to claim 11 wherein the boranocarbonate is $Na_2(H_3BCO_2)$.

13. (Withdrawn) A pharmaceutical composition according to claim 1 wherein the medicament further includes a guanylate cyclase stimulant or stabilizer.

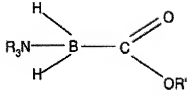
14. (Withdrawn) A pharmaceutical composition according to claim 13 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

15. (Withdrawn) A pharmaceutical composition according to claim 13 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

16. (Withdrawn) A pharmaceutical composition according to claim 13 wherein the medicament is adapted for one of simultaneous and sequential administration of the boranocarbonate compound or ion and the guanylate cyclase stimulant or stabilizer.

17. (Previously presented) A pharmaceutical composition according to claim 1 wherein the boranocarbonate compound or ion is other than

I. $K_2(H_3BCOO)$

II. 

where R, R' = H, alkyl, perfluoroalkyl.

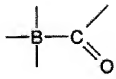
18. (Withdrawn) Method of treatment of a mammal comprising stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or the treatment of any of acute or chronic systemic hypertension, radiation damage, endotoxic shock, hyperoxia-induced injury, apoptosis, cancer, transplant rejection, post-operative ileus, arteriosclerosis, post-ischemic organ damage, angina, haemorrhagic shock, sepsis, penile erectile dysfunction, vascular restenosis, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis, or treatment in balloon angioplasty, aortic transplantation or survival of a transplanted organ, by administration of a boranocarbonate compound or ion adapted to make CO available for physiological effect.

19. (Withdrawn) Method according to claim 18 comprising stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or treatment of any of acute or chronic systemic hypertension, hyperoxia-induced injury, cancer by the pro-apoptotic effect of CO, transplant rejection, post-operative ileus, post-ischemic organ damage, angina, haemorrhagic shock, penile erectile dysfunction, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis, or treatment in balloon angioplasty or aortic transplantation.

20. (Withdrawn) Method according to claim 19 wherein including administration by an oral, intravenous, subcutaneous, nasal, inhalatory, intramuscular, intraperitoneal, transdermal,

transmucosal or suppository route.

21. (Withdrawn) Method according to claim 19 wherein the molecular structure of the boranocarbonate compound or ion includes the moiety



22. (Withdrawn) Method according to claim 21 wherein the boranocarbonate compound or ion includes the moiety BH_3-CO-.

23. (Withdrawn; Currently Amended) Method according to claim 21 wherein the boranocarbonate is a compound or anion of the formula:

$BH_x(COQ)_yZ_z$

wherein:-

x is 1, 2 or 3

y is 1, 2 or 3

z is 0, 1 or 2

$x + y + z = 4$,

each Q is O^-, representing a carboxylate anionic form, or is OH, OR, NH_2, NHR, NR_2, SR or halogen, where the or each R is alkyl ~~(preferably of 1 to 4 carbon atoms)~~,

each Z is halogen, NH_2, NHR', NR'_2, SR' or OR' where the or each R' is alkyl ~~(preferably of 1 to 4 carbon atoms)~~.

24. (Withdrawn) Method according to claim 23 wherein z is 0.

25. (Withdrawn) Method according to claim 23 where y is 1.

26. (Withdrawn) Method according to claim 23 where x is 3.

27. (Withdrawn) Method according to claim 23 where the boranocarbonate is an anion, with at least one Q in the form of O^- or OR, and the composition includes at least one metal cation.

28. (Withdrawn) Method according to claim 27 wherein the or each metal cation is an alkali metal cation or an alkaline earth metal cation.

29. (Withdrawn) Method according to claim 27 wherein the boranocarbonate is $Na_2(H_3BCO_2)$.

30. (Withdrawn) Method according to claim 19 wherein the medicament further includes a guanylate cyclase stimulant or stabilizer.

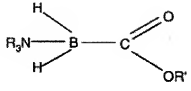
31. (Withdrawn) Method according to claim 30 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

32. (Withdrawn) Method according to claim 30 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

33. (Withdrawn) Method according to claim 30 comprising simultaneous or sequential administration of the boranocarbonate compound or ion and the guanylate cyclase stimulant or stabilizer.

34. (Withdrawn) Method according to claim 19 wherein the boranocarbonate compound or ion is other than

I. $K_2(H_3BCOO)$

II. 

where R, R' = H, alkyl, perfluoroalkyl.

35. (Withdrawn) A method of treating a viable mammalian organ extracorporeally or an isolated mammalian organ, comprising contacting the organ with a pharmaceutical composition comprising a boranocarbonate compound or ion adapted to make CO available for physiological effect.

36. (Withdrawn) A method according to claim 35 wherein the boranocarbonate compound or ion is as defined in claim 4.

37. (Withdrawn) Method according to claim 35 wherein the composition further includes a guanylate cyclase stimulant or stabilizer.

38. (Withdrawn) Method according to claim 37 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

39. (Withdrawn) Method according to claim 37 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

40. (Withdrawn) A medical or veterinary implant carrying, in a form releasable at the implant site, a boranocarbonate compound or ion adapted to make CO available for physiological effect.

41. (Withdrawn) An implant according to claim 40 wherein the boranocarbonate compound or ion is as defined above.

42. (Withdrawn) An implant according to claim 40 wherein the medicament further includes a guanylate cyclase stimulant or stabilizer.

43. (Withdrawn) An implant according to claim 42 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

44. (Withdrawn) An implant according to claim 42 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

45. (Withdrawn) A method of introducing CO to a mammal as a therapeutic agent comprising:
    a) administering a boranocarbonate which makes available CO suitable for physiological effect; and
    b) administering a guanylate cyclase stimulant or stabiliser.

46. (Withdrawn) A method according to claim 45, which is for the stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or for the treatment of any of hypertension, radiation damage, endotoxic shock, inflammation, inflammatory-related diseases, hyperoxia-induced injury, apoptosis, cancer, transplant rejection, post-operative ileus, arteriosclerosis, post-ischemic organ damage, myocardial infarction, angina, haemorrhagic shock, sepsis, penile erectile dysfunction, adult respiratory distress syndrome, vascular restenosis, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis or for treatment in balloon angioplasty, aortic transplantation or survival of a transplanted organ.

47. (Withdrawn) A method according to claim 45, which is for the stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically

effective agent, or for the treatment of any of acute or chronic systematic hypertension, radiation damage, endotoxic shock, hyperoxia-induced injury, apoptosis, cancer, transplant rejection, post-operative ileus, arteriosclerosis, post-ischemic organ damage, angina, haemorrhagic shock, sepsis, penile erectile dysfunction, vascular restenosis, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis or for treatment in balloon angioplasty, aortic transplantation or survival of a transplanted organ.

48. (Withdrawn) A method according to claim 45, which for the stimulation of neurotransmission, vasodilation or smooth muscle relaxation by CO as a physiologically effective agent, or for the treatment of any of acute or chronic systematic hypertension, hyperoxia-induced injury, cancer by the pro-apoptotic effect of CO, transplant rejection, post-operative ileus, post-ischemic organ damage, angina, haemorrhagic shock, penile erectile dysfunction, hepatic cirrhosis, cardiac hypertrophy, heart failure and ulcerative colitis or for treatment in balloon angioplasty or aortic transplantation.

49. (Withdrawn) A method according to claim 45, which is for treatment of any of acute or chronic systemic hypertension, pulmonary hypertension, transplant rejection, post-operative ileus, arteriosclerosis, post-ischemic organ damage, myocardial infarction, penile erectile dysfunction, vascular restenosis, hepatic cirrhosis, cardiac hypertrophy, heart failure, chronic anal fissure, internal anal sphincter disease, anorectal disease, and ulcerative colitis or for treatment in balloon angioplasty or aortic transplantation.

50. (Withdrawn) A method according to any one of claim 45 wherein the boranocarbonate compound or ion is as defined above.

51. (Withdrawn) A method according to claim 45 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

52. (Withdrawn) A method according to claim 45 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

53. (Withdrawn) A pharmaceutical composition comprising:

a) a boranocarbonate compound or ion which makes available CO suitable for physiological effect; and

b) a guanylate cyclase stimulant or stabiliser.

54. (Withdrawn) A composition according to claim 53 wherein the boranocarbonate compound or ion is as defined above.

55. (Withdrawn) A composition according to claim 53 wherein the guanylate cyclase stimulant or stabilizer is a molecule or ion uncombined with the boranocarbonate compound or ion.

56. (Withdrawn) A composition according to claim 53 wherein the guanylate cyclase stimulant or stabilizer is YC-1.

57. (Withdrawn) A composition according to claim 53, adapted for one of simultaneous and sequential administration of the boranocarbonate compound or ion and the guanylate cyclase stimulant or stabilizer.